

**Remarks:**

Claims 1-41 were pending in the application. Claims 1-9, 23-34, and 38 were previously canceled.

Claims 10-15, 17-22, 35, 36, and 39-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mumby (U.S. Patent No. 5,563,512) in view of Applicant's Admitted Prior Art (AAPA). The Examiner concludes Mumby's antenna coil 100 is a lateral resistivity sensor. Applicant respectfully disagrees. The coil-type antenna 100 disclosed by Mumby is not a lateral resistivity sensor. Lateral resistivity sensors are sensors that can be approximated by electric dipoles. Typical examples of lateral resistivity sensors include electrodes and toroidal coils. Coil or loop-type antennas such as those disclosed by Mumby and generally found on propagation or induction tools are approximated by magnetic dipoles, not electric dipoles. These are physically quite distinct. A lateral resistivity sensor would be insensitive to a signal from a coil-type antenna, and vice versa. To further illustrate Mumby's failure to disclose lateral resistivity sensors, the term "electrode" does not appear in Mumby and the term "lateral" only appears once in the context of a laterally directed groove or channel. Thus, Mumby does not disclose a lateral resistivity sensor and the Examiner has not established a prima facie case of obviousness. The combination of a lateral resistivity sensor and a propagation or induction-type sensor is not taught or suggested in the prior art.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance.

No fee is believed to be due at this time. If the appropriate Petition for an Extension of Time is not attached hereto (or any other Petition required of the application), this statement shall serve as Applicants' Petition to the U.S.P.T.O. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments related to this response to Deposit Account No. 190610 (24.0808US).

The undersigned is available for consultation at any time, if the Examiner believes such consultation may expedite the resolution of any issues.

Respectfully submitted,

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